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# **National Geospatial-Intelligence Agency (NGA)**



## **Boosting Innovative GEOINT (BIG)**

**Broad Agency Announcement (BAA)**

**HM0476-16-BAA-0001**

**Amendment [3](#)**

**31 March 2017**

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## 1 INTRODUCTION

This Broad Agency Announcement (BAA) by the National Geospatial-Intelligence Agency (NGA) solicits offers for the award of contracts under the Boosting Innovative GEOINT (BIG) for inventive, actionable ideas and proposals that will enhance GEOINT and welcomes all innovative ideas for path-breaking research and innovative techniques that may advance the GEOINT mission. This requires new ways of doing business in order to meet unexpected and emergent requirements of the dynamic world we live in and anticipate tomorrow's unknown challenges. Specifically, NGA is seeking ideas and techniques that makes the biggest change and promotes moving the Agency forward on different path in lieu of improving the current path we are pursuing. This BAA is published in accordance with FAR Part 35.016 and 6.102(d) (2). A formal Request for Proposal (RFP), solicitation or additional information regarding this announcement will not be issued.

NGA will not issue paper copies of this announcement. NGA reserves the right to fund all, some or none of the proposals in response to this announcement and to create and maintain a reserve list of proposals for potential funding in the event that sufficient funding becomes available. NGA provides no funding for direct reimbursement of proposal development. White papers, technical, and price proposals (or any other material) submitted in response to this BAA will not be returned. All proposals will be treated as sensitive competitive information and their contents will be disclosed only for the purposes of evaluation. All proposals submitted shall be appropriately marked at the appropriate classification level, including "Unclassified."

### 1.1 Agency Name

National Geospatial-Intelligence Agency (NGA), 7500 GEOINT Drive Springfield, VA 22150

### 1.2 Research Opportunity Title

Boosting Innovative GEOINT (BIG)

### 1.3 Research Opportunity Number

HM0476-16-BAA-0001

### 1.4 Submission / Locations

## THIS WILL BE A TWO-STEP BAA:

**First Step: WHITE PAPER DUE DATE AND TIME: Will vary per Research Objective.**

**Only white papers are due at this step.** It will not be possible to submit white papers after the 11:59 AM (Eastern Time) on the due date specified in Section 9. All white paper submissions must comply with the submission guidelines/templates provided on the respective websites. Failure to comply will result in the rejection of the white paper during the review.

**Second Step: FULL PROPOSAL DUE DATE AND TIME:** Proposals will only be accepted in response to invitations for full proposals requested from NGA Contracting Officers to Offerors with white papers determined to be technically acceptable as evaluated against criteria

published in this BAA. Full Proposals will be due 45 days after the Government extends an invitation to those Offerors who have been selected to submit a Full Proposal no later than 11:59 AM (Eastern Time) on the specified due date listed in the Request for Proposal.

## **1.5 Research Objectives/Opportunity Description**

### **1.5.1 TOPICS/CHALLENGES: BOOSTING INNOVATIVE GEOINT (BIG)**

NGA is moving to an environment in which the use of diverse data sources to address customer needs and knowledge gaps will become an everyday practice. This environment will be marked by the inclusion of open source and commercially available data as well as the traditional government-sponsored data collections on which NGA has mainly depended. Combining these new sources with the reliability and accuracy of dedicated sensors will enable our customers to have a greater understanding of the foundational structure of the world, its dynamic interactions, and even anticipate potential impacts. However, unlike the past where we have relied largely on volume-based collection to satisfy needs and gaps, in the future we will focus on maximizing, for the customer, the value of the data we explicitly source and orchestrate.

*SEE APPENDIX A for Specific Topic(s)*

## **2 GENERAL INFORMATION**

### **2.1 Questions about this BAA**

Offerors will be directed to use the Intelligence Community (IC) Acquisition Research Center (IC ARC), hereafter referred to as the IC ARC, for questions and answers (Q&A) at <https://acq.westfields.net>. SEE APPENDIX A for Topic(s) question close date.

### **2.2 BAA Open Period**

This BAA will remain open in FEDBIZOPPS for a period of three (3) years from the date of posting with an overall ceiling of \$29,500,000.

Over the life of this BAA amendments shall be issued through FEDBIZOPPS for white papers or proposals calling for additional (specific) research efforts or areas of interest identified by NGA. Amendments to this BAA shall be posted to FEDBIZOPPS when appropriate. Interested parties are encouraged to periodically check these websites for updates and to establish automated alerts notifying them of any amendment postings.

Through this competition, NGA anticipates making multiple contract awards in the Topic Areas described in the BAA. All awards will be based on merit competition.

### **2.3 Amendments**

Amendments or links to amendments will be posted to the FEDBIZOPPS – <https://www.fbo.gov/>

Although other web pages may repost these amendments, Offerors are advised that the FEDBIZOPPS web page is the only official record.

## **2.4 Basis of Award**

Awards will be based on the best full proposals that are determined to be most beneficial to the Government with appropriate consideration given to the evaluation factors, order of importance, and selection preferences. Award will be made to the Offerors whose submission is determined to advance the best ideas or concepts, has the highest competence in the specific field of science, has technical merit, and/or has importance to Agency programs based on the factors and preferences of this BAA. This may not necessarily be the proposal offering the lowest price or receiving the highest evaluated rating.

## **2.5 Notifications**

The evaluation status of white paper packages and full proposals will be provided at two points. An email will be sent to each Offeror after completion of white paper package evaluations. The email will either inform the Offeror that their white paper is no longer under consideration or will be invited to prepare a full proposal in accordance with instructions contained in Section 5 below. In a similar manner, Offerors that submit a full proposal will receive an email informing them that their proposal is either no longer under consideration or they will receive an award document.

## **2.6 Award Value (SEE APPENDIX A)**

The target award value for contracts is dependent on funding and the Research Objective, but will not exceed the maximum amount for the particular Topic. White papers or proposals submitted for greater than the maximum amount for the particular Topic may be eliminated from further consideration.

# **3 ELIGIBILITY**

## **3.1 Eligible Sources**

NGA is seeking innovative approaches to problem solving and strongly encourages all types of US organizations--universities, small businesses, non-profits, large companies, etc. -- to submit ideas in the form of white papers. All responsible sources capable of satisfying the Government's needs may submit a white paper under this BAA.

## **3.2 Foreign Participants**

Foreign participants and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, and any other applicable statutes. Some requirements may cover export-controlled technologies. Research in these areas is limited to "U.S. persons" as defined in the International Traffic in Arms Regulations (ITAR), 22 CFR §1201.1.

## **3.3 Federally Funded Research & Development Centers (FFRDCs)**

Federally Funded Research and Development Centers (FFRDCs) and Government entities are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they address the following conditions (applies to FFRDCs and Government entities proposing as a prime or subcontractor):

- FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector.
- FFRDCs must provide a letter on letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry and compliance with the associated FFRDCs sponsor agreement's terms and conditions.
- Government entities must clearly demonstrate that the work proposed is not otherwise available from the private sector.
- Government entities must provide written documentation citing specific statutory authority establishing their ability to propose to Government solicitations.

### **3.4 Department of Defense Laboratories**

Department of Defense laboratories are not eligible to receive awards under this BAA and should not submit white papers in response to this BAA. As with FFRDCs, these organizations may team with responsible sources from academia and industry that are submitting proposals under this BAA.

### **3.5 University Affiliated Research Centers (UARCs)**

University Affiliated Research Centers are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contracts.

### **3.6 Teaming**

NGA will also accept white papers and proposals from teams (industry and industry, industry and university, university and university, etc.). Offerors who propose a teaming arrangement must name which organization will operate as the main point-of-contact or lead for the team. Both the white paper, and if requested, the proposal must be submitted by the team lead organization. A description of each team member's role in the team must be included. NOTE: In the event of an award to a team proposal, the contract award will be made to the team lead (Prime) organization named in the proposal for the purposes of contract administration.

Teams are also encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with their team members

## **4 WHITE PAPER PACKAGE PREPARATION & SUBMISSION INSTRUCTIONS**

### **4.1 White Papers**

All Offerors submitting white papers must have an active registration in SAM at <https://www.sam.gov/portal/public/SAM>. To be accepted for evaluation, a research white paper must be received in complete form by the Government in accordance with the following paragraphs.

White papers shall address one of the requirements listed in Section 1.5, Appendix A of this announcement. Only UNCLASSIFIED white papers will be accepted unless otherwise instructed per a particular Topic (see Appendix A, Topics). If an Offeror does not submit a white paper before the specified closing date and time, the Offeror will not be eligible to submit a full proposal. The Government's decision to invite a full proposal will be based upon the evaluation results of the white paper submission. White papers should focus on one requirement per paper. There is no limit on the number of white papers an Offeror may submit in response to this BAA.

Submission of a white paper does not obligate the institution to submit a proposal or the Government to invite the submission of a proposal. Upon receipt, NGA will review a white paper and advise the Offeror of the results ("Go" or "No Go") of the review within approximately 35 business days following receipt of the white paper. The Government may contact the Offeror for additional discussions and clarifications. Offerors whose white papers receive a favorable review will be invited to prepare a full proposal in accordance with instructions contained in Section 5 below. On occasion, this invitation may contain feedback. Debriefings will not be provided for white papers that receive a "No Go". An invitation to prepare a proposal does not obligate the Offeror to submit a full proposal, or the Government to make an award if the Offeror submits a proposal.

Offerors shall submit their white papers via email to [NGA\\_BIG\\_BAA@nga.mil](mailto:NGA_BIG_BAA@nga.mil). For Classified Topics, see Section 11 *Addendum for Classified Topics*.

## **4.2 Format of White Papers**

### **4.2.1 Number of Pages**

The white paper is limited to four (4) single-sided pages (excluding cover letter, cover page and estimated price). Pages submitted in excess of the white paper page limit will not be read or evaluated.

### **4.2.2 Number of Copies & Format**

One electronic copy of the white paper, in a searchable Portable Document Format (PDF), shall be emailed to [NGA\\_BIG\\_BAA@nga.mil](mailto:NGA_BIG_BAA@nga.mil). For Classified Topics, see Section 11 *Addendum for Classified Topics*.

### **4.2.3 Text & Font Format**

White papers shall be prepared single-spaced in 12 point Times New Roman font, with at least one inch margins on top, bottom and sides, for printing on 8½ x 11 inch paper. Pages shall be numbered consecutively. Bolding, underlining, and italics may be used to identify topic demarcations or points of emphasis. Graphic presentations, including tables, while not subject to the same font size and spacing requirements, shall have spacing and text that is easily readable.



#### **4.2.4 Headers**

The Offeror's name, applicable BAA number and Research Objective shall be in the header of each page. The header may be included in the one-inch margins.

#### **4.2.5 Virus Check**

Perform a virus check before submitting the white paper. If a virus is detected, it may cause rejection of the file.

#### **4.2.6 Security**

Do not lock or encrypt any files submitted as part of your white paper submission.

### **4.3 White Paper Package Structure**

- A one page cover letter (optional)
- A cover page, labeled "(TOPIC NUMBER AND NAME as appropriate) WHITE PAPER," that includes the BAA number, proposed title, and proposer's technical point of contact, telephone number, fax number and email address. Paper titles should indicate the focus of the proposed basic research.
- Identification of the problems and issues
- Proposed research, technical approaches and how it advances the topic
- Potential impact on and contributions to NGA capabilities
- Expertise and any Teaming arrangements
- Summary of estimated price

The price portion of the proposed research identified in the white paper shall contain a brief summary of the estimated prices, which include salaries, materials, travel, and profit.

Any proprietary data included in submissions must be identified. The Offeror must also identify any technical data contained in the white paper that is to be treated by the Government as limited rights data. In the absence of such identification, the Government will assume unlimited rights to all technical data in the white paper. Records or data bearing a restrictive legend may be included in the white paper. However, Offerors are cautioned that portions of white papers may be subject to release under terms of the Freedom of Information Act, 5 U.S.C. 552.

### **4.4 White Paper Package Evaluations**

#### **4.4.1 Evaluation Criteria**

White paper packages will be evaluated using three criteria. All factors will be evaluated using a "Go" or "No Go" decision making process. Adjectival Ratings are Blue-Outstanding, Green-Very Good, Yellow-Satisfactory, or Red-Unsatisfactory and will be used to determine which white papers are recommended for the "Go" or "No Go" determination. A rating below Satisfactory in either Factor #1 or #2 will not be considered for further review.

- Factor #1 – Contribution to the Requirement  
The degree to which the technical approach is relevant to the proposed requirement.

- Factor #2 – Technical Approach/Qualifications  
The degree to which the technical approach is innovative, feasible, achievable, complete and supported by a technical team that has the expertise and experience to accomplish the proposed tasks.
- Factor #3 – Price  
The degree to which the proposed price is fair and reasonable for the proposed technical approach and does not exceed the maximum defined by the Topic (SEE APPENDIX A).

#### **4.4.2 Order of Importance**

Factor #1 and Factor #2 are equally important. Factors #1 and #2 when combined are significantly more important than Factors #3. The Government is more concerned with obtaining superior technical capabilities than with making awards at a lower price to the Government.

## **5 REQUIREMENTS FOR PROPOSALS**

### **5.1 Overview**

Proposals may offer applied research, but must include a simulation, limited development and/or capability demonstration in both the Government's Development Test Environment and the Government's Demo Ops Environment. Demonstrations will be conducted at NGA's NCE facility to maximize Government participation. Exceptions can be made to the venue if the infrastructure at NGA is not robust enough to run the demonstration effectively. Offerors should propose the different demonstration venue as part of the proposal.

Through this competition, NGA anticipates making multiple contract awards in the Topic Areas described in this BAA. All awards will be based on merit competition. The goal is to make awards among the various Topic Areas. However, depending on the quantity and quality of proposals received, NGA may elect to not make any award(s) under a research Topic Area. The NAICS codes for this procurement includes 541712, Research and Development in the Physical, Engineering and Life Sciences, but other NAICS codes may apply as well.

Note: Only firm fixed price procurement contracts will be awarded as a result of this BAA. Grants, cooperative agreements, and/or any other forms of federal assistance will not be awarded.

If NGA determines merit in any white paper submission, NGA at its discretion, may invite the Offeror to provide a full proposal for their effort.

The Government will evaluate all proposals submitted under the terms and conditions of this BAA. Proposals will be evaluated against criteria in paragraph 5.7 below. The estimated contract start date identified in Section 9 should be used for budget and proposal purposes. Registration in the DoD's System for Award Management (SAM) database is a prerequisite for receiving an award resulting from this BAA. Proposals shall reflect compliance or initiation of

compliance with this regulation. SAM is accessed via Internet at <http://www.sam.gov> for more information. The Offeror's DUNS number (and CAGE code if one has been assigned) must accompany the proposal in order to verify SAM registration. Proposals shall identify the Offeror's taxpayer identification number.

## 5.2 Inquiries from Offerors

Potential Offerors can submit questions or comments regarding this BAA, but these must be submitted via the Acquisition Research Center (ARC) at <https://acq.westfields.net>. Institutions of all kinds also can register for future unclassified RFP and BAA solicitations. For Classified Topics, see Section 11 *Addendum for Classified Topics*.

Once registered and logged in at the ARC, potential Offerors can click and select the BIG BAA ARC page under NGA. Offerors must use the Q&A link on that page to submit a question or comment, and to view the responses to all questions and comments, including those submitted by other organizations. For technical questions/comments, Offerors should reference the Topic Area number in order for the Government to better direct and respond to Topic Area questions. Cut-off date for questions varies per Research Objective (See Section 9).

Requests for hard copies of the BAA will not be honored. Interested parties must stay apprised of this solicitation including revision information and answers to submitted questions by checking <http://fedbizopps.gov>. Amendments to the BAA will only be posted on <http://fedbizopps.gov>.

## 5.3 Proposal Submission Information

**Offerors shall submit their proposals via email to [NGA\\_BIG\\_BAA@nga.mil](mailto:NGA_BIG_BAA@nga.mil).** For Classified Topics, see Section 11 *Addendum for Classified Topics*.

- NGA will acknowledge receipt of the proposal.
- The submission shall be provided in three distinct volumes: Technical, SOW, and Price. Proposals should be three MS Word file or three searchable PDF file with Copy permission granted.
- Files must not be zipped (.zip), and must be no more than 3.0 MB in file size.
- Offerors may submit more than one proposal across Topic Areas but each individual proposal shall reference BAA Number HM0476-16-BAA-0001 and shall specifically identify the Topic Area for which it is being submitted. Although a proposal may be relevant to more than one Topic Area, it must be submitted under one Topic Area. The Government will only accept unclassified proposals. For Classified Topics, see Section 11 *Addendum for Classified Topics*.
- All documents shall be unclassified and shall be marked appropriately, including "UNCLASSIFIED" unless otherwise instructed per a particular Topic (see Appendix A, Topics).

#### 5.4 Late Submissions

Proposals will only be considered for award if submitted in a timely manner. If a proposal is submitted in an untimely manner, after 11:59 AM (Eastern Time) on the due date, the criteria in Federal Acquisition Regulation part 15.208 will apply.

- FAR 15.208 includes the following provisions:
- “Any proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition; and—
- If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- It was the only proposal received.”

When sending electronic files, the Offeror shall account for potential delays in file transfer from the originator’s computer server to the Government website/computer server. Offerors are encouraged to submit early to avoid potential file transfer delays due to high demand or problems encountered in the course of the submission.

Acceptable evidence to establish the time of receipt includes electronic evidence of receipt. Offerors should print and maintain for their records the delivery/read receipt with the date/time appearing in the email submission. All submissions shall be emailed to the [NGA\\_BIG\\_BAA@nga.mil](mailto:NGA_BIG_BAA@nga.mil) mailbox before the due date and time in order to be considered. For Classified Topics, see Section 11 *Addendum for Classified Topics*. **There will be no exceptions.**

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the site designated for receipt by the date and time specified, then the date and time specified for receipt will be deemed to be extended to the same time of day specified in the BAA on the first work day on which normal Government processes resume.

Proposals may be withdrawn by written notice received at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

#### 5.5 Proposal Format

Proposals must be complete and self-contained to qualify for review.

- Proposals shall be prepared single-spaced in 12 point Times New Roman font, with at least one inch margins on top, bottom and sides, for printing on 8½” by 11” paper.
- Separate attachments, such as institutional brochures or reprints that are not germane to the proposal, are not allowed, and will not be reviewed.

Do not lock or encrypt any files emailed as part of the proposal submission. Proposal prices and terms and conditions shall remain valid for 365 days from the submission date. Perform a virus check before emailing any files to the submission websites. If a virus is detected, it may cause rejection of the file.

#### **5.5.1 Cover Page**

The cover page shall include the BAA number, proposal title, and the specific TOPIC addressed.

- Although a proposal may span more than one topic, it must be submitted under only one topic. Please ensure the Topic is clearly identified. The cover page must also indicate the name, phone number, fax number, postal address, and email address of both the Offeror Technical point of contact AND the appropriate Contracting point of contact that has the authority to negotiate and commit the Offeror to a binding contract.

#### **5.5.2 Executive Summary**

Provide a proposal summary no longer than one page. This shall summarize the significant and important characteristics, approaches and proposed research to further the objectives in the relevant topic.

#### **5.5.3 Project Description**

The project description portion of the proposal shall be limited to 7 pages and should clearly:

- A. Describe in detail the research to be undertaken. State the objectives and approach and the relationship to state-of-knowledge in the field and to similar work in progress. Include appropriate literature citations and prior work. Discuss the nature of expected results.
- B. Describe the qualifications of the lead researcher and the qualifications of other key researchers involved in the project. For teaming or collaborations, the Offeror must name one responsible technical point-of-contact that will lead the effort.
- C. List any proposals submitted, existing funding, or relationships with Federal or State Government, Dept. of Defense, and/or NGA any existing contracts, grants, Mentor-Protégé agreements, etc. for the same or similar work. Provide any details that are important for consideration.
- D. Discuss any travel and/or material proposed, the purpose and how they relate to the research proposed, including to a Kickoff meeting. Do not include prices in this section.
- E. Describe the approach to the deliverables that the Offeror will provide and confirm the required deliverables described in the Statement of Work will be provided. Offerors may propose additional deliverables.

#### 5.5.4 Statement of Work

The statement of work (SOW) should clearly detail the scope and objectives of the effort and the specific research to be performed.

If the proposal is selected for award:

- The proposed SOW will be used as the basis of negotiation and the negotiated version will be incorporated as an attachment to any resulting award. The SOW shall not include any proprietary restrictions.
- The SOW shall be enforceable, and should be void of inconsistencies.
- The proposed SOW should contain a summary description of the technical methodology, as well as a thorough task description, but not so much as to make the SOW overly detailed.
- The SOW shall be limited to five pages and will not count toward the total page count of the project description. The SOW is included as part of the **3.0 MB** file size limitation.

A. The following decimal numbering system is required for SOW preparation:

Table of Contents

- 1.0 Objective
- 2.0 Scope
- 3.0 Background
- 4.0 Tasks/Technical Requirements
  - 1st sub-level 4.1 Task
  - 2nd sub-level 4.1.1 Sub-task
  - 3rd sub-level 4.1.1.1 Second level sub-task

B. Potential Offerors should not include their names, or any proprietary information in the SOW.

C. The following is the format, as well as explanation of the elements that should be incorporated into the SOW. Begin the SOW at Paragraph 1.0.

1.0– Objective: (give a brief overview of the specialty area, describe why it is being pursued, what you are trying to accomplish, and how it advances the topic)

2.0– Scope: (Include a statement of what the SOW covers, i.e., technology area to be investigated, objectives/goals, and major milestones for the effort.)

3.0– Background: (Identify appropriate documents that are applicable to the effort being performed. This section includes any information, explanations, or constraints that are necessary in order to understand the requirements. It may include relationship to previous, current, and future operations, as well as techniques previously tried.)

4.0– Technical Requirements:

(a) A clear, detailed description of tasks that represent the work to be performed which are contractually binding. This portion of the SOW should be developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the overall program goals and how it advances the topic. The work effort should be segregated into major tasks and identified in separately numbered paragraphs according to the decimal system above. Each numbered major task should delineate, by subtask, the work to be performed. The SOW must contain every task to be accomplished.

(b) All tasks must be definite, realistic, and clearly stated. Use “shall” whenever the work statement expresses a provision that is binding. Use “should” or “may” whenever it is necessary to express a declaration of purpose. Use “will” in cases where no Offeror equipment is involved; e.g., power will be supplied by the Government. Use active voice in describing work to be performed.

(c) Do not use acronyms or abbreviations without spelling-out acronyms and abbreviations at the first use; place the abbreviation in parenthesis immediately following a spelled-out phrase. This provides the definition for each subsequent reuse.

(d) If presentations/meetings are identified in your schedule, the following paragraph is required in the SOW: “Conduct presentations/meetings at times and places specified and mutually agreed to with the Government.” If travel is identified put the following statement in the SOW: “All travel will be accomplished in accordance with the Federal Joint Travel Regulations.”

5.0– Contract Deliverables:

All contract deliverables associated with this proposal shall be identified and described in detail under this section. Below are the required contract deliverables for this BAA. The proposed effort shall be tailored to these contract deliverables. If the Offeror wishes to propose other deliverables besides those listed below, they shall be described separately. A proposal may be deemed “Unacceptable” if it does not identify and clearly describe the final deliverables to the Government.

Specific contract deliverables for all Topic Areas are as follows:

(1) Payment Milestone Deliverable - CONOPS: This deliverable will describe a day in the life with the proposed capability. It should articulate how either topic area will be significantly better as a result of the capability or how the mission will be significantly benefited by its employment. This deliverable will be completed at the half-way point of the effort’s Period of Performance.

(2) Payment Milestone Deliverable – Demonstration in the Government’s Development Test Environment: This simulation, initial operational prototype and/or capability demonstration will be completed 15 days before the end of the contract. Also due at that time are copies of algorithms, software code, software tools or other research artifacts developed with funds

from this contract. (The Offeror shall provide a description of the type of demonstration and nature.)

(3) Research Report: The final research report shall have statements that document the research and conclusions regarding the research addressing the topic area. This report will be delivered 15 days before the end of the contract. This report shall include how the Government might realize a value and benefit of the proposed effort. It may also include the Offeror's concept of future commercialization of their research or technology and/or potential transition to the marketplace as a result of their effort.

## 5.6 Price Proposal

Only firm fixed price completion contracts are anticipated. An assessment of the Government's confidence in the offeror's ability to perform within their submitted price proposal will be made base on the assumption of adequate price competition. The financial portion of the proposal shall contain prices in sufficient detail for meaningful evaluation. The Government will perform a price analysis on all proposals submitted, as applicable. If applicable, the contractor shall include the name, address, and telephone number of the Offeror's cognizant Defense Contract Audit Agency office. There is no page limitation on the price proposal; however, the price proposal is included as part of the overall size limit of **3.0 MB** for the proposal.

Price elements required in the proposal shall include, but are not limited to:

- A. Salaries: Provide a table of the estimated number of hours by labor category and the burdened hourly rate.

Salaries (**Sample ONLY**)

Labor Category	Hours	Burdened Rate	Total
System Engineer	960	\$54.75	\$52,560
Technical Engineer	560	\$42.15	\$23,604
Software Engineer	960	\$79.60	\$76,416
Software Engineer II	960	\$84.76	\$81,369
TOTAL	3,440		\$233,949

- B. Material/equipment prices should be listed by type and kind with associated price. Please advise if the prices are based on vendor quotes, data, engineering estimates, and provide copies of vendor quotes and/or catalog pricing data.



**Materials (Sample ONLY)**

Item	Price	Quantity	Total	Back Info
Electron Microscope	\$1,000	3	\$3,000	Vendor Quote #1234
Test Equipment	\$150	15	\$2,250	Vendor Quote #5678
<b>TOTAL</b>			\$5,250	

C. Travel: This shall include the trips proposed with a breakdown per trip of the number of travelers, location, and duration, proposed prices for transportation, rental car and per-diem. Travel shall be accomplished in accordance with the Federal Joint Travel Regulations.

D. Profit.

E. Total Price.

### **5.7 Proposal Evaluation and Selection Process**

Proposals are evaluated solely on the criteria published in this BAA. The proposal must stand on its own merit as submitted. Each proposal will be evaluated on its own merits or non-acceptability without regard to other proposals submitted under this announcement.

#### **5.7.1 Evaluation Criteria**

The evaluation criteria are:

I. Scientific and Technical Merits of the proposed research (equally important as Criterion II and more important than Criteria III and IV)

The proposed scientific and technical approach is feasible, achievable and complete to accomplish the proposed tasks that will advance the topic to meet unexpected and emergent requirements.

II: Relevance and Potential Contributions (equally important as Criterion I and more important than Criteria III and IV)

The relevance and potential contributions of the research, to include tools, algorithms, and/or computer code in support of the objectives, specific topic area and deliverables defined in the Statement of Work. NGA is looking for new, innovative approaches or concepts that have the likelihood of being able to be integrated into NGA systems.

Evaluation criteria, of lesser importance than Criteria I and II are:

**III: Performance Confidence**

The proposed scientific and technical approach is supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks.

IV. For a Price proposal, NGA will conduct a price analysis per FAR 15.404-1(b). This price analysis will consider the fair & reasonableness of the proposed price.

**5.7.2 Selection Process**

The evaluation process is a two-step review process:

Proposals will be grouped together by topic.

Contractors will not be evaluators. However, some NGA support contractors who are subject-matter experts for Topic Areas may provide expert advice to the Expert Team and/or Evaluation Panel and some will provide administrative support for the evaluation process.

- A. Step one, Initial Evaluations: Proposals will be initially evaluated, adjectival rated (Blue-Outstanding, Green-Very Good, Yellow-Satisfactory, or Red-Unsatisfactory), and rated within each topic by a Government Expert Team using the criteria in paragraph 5.7.1 above. Within each topic, the Expert Team will individually evaluate each proposal on its own merit and then come to consensus on each proposal.
- B. Step two, within each topic, the Evaluation Panel will consider the overall contribution of each proposal as reflected by the initial Expert Team evaluation, the potential contribution to the advancement of the targeted topic, the amount of similar or related research currently underway on a given topic, and the amount of available funding. The Evaluation Panel will make a recommendation for each proposal.
- C. Award Recommendations: The Evaluation Panel reviews the adjectival ratings and takes into account the diversity of proposals across the topic. Adjectival ratings will not be compared across topics. The Evaluation Panel compiles and forwards a list of proposals recommended for award in order of preference, along with a description and results of the evaluation process, to the Source Selection Authority (SSA) by topic for final selection.

In summary, the Evaluation Panel will recommend the proposals that most effectively advance the Research Objectives of paragraph 1.5 as evaluated under the criteria in paragraph 5.7.1. The number of awards made is dependent upon the amount of available funding. If additional funding becomes available within twelve (12) months after receipt of proposals, NGA may choose to make additional awards under the terms of this BAA from the remaining selectable proposals.

**6 PAYMENT**

Payment shall be in accordance with the milestone table outlined below. The negotiated milestone table will be incorporated into the final contract.

Milestones Table: This shall be filled in by the Offeror. The Offeror can propose up to two (2) payment milestones. The last milestone has to be associated with the delivery of the demonstration and the final research report.

Milestone	Milestone Date	Milestone Amount
CONOPS	Halfway point of the project	25% - The Offeror shall fill the dollar amount in based on its proposed price. This milestone is no more than 25% of the price.
Demonstration, Research Report, and any final software or hardware developed under this effort delivered. (The Offeror can tailor this milestone description to meet the proposed deliverables)	15 days before the end of the contract period of performance.	75% - The Offeror shall fill the dollar amount in based on its proposed price. This milestone is no less than 75% of the price.

Small Businesses may propose contract type and payment terms in white paper submittals for the Government's consideration.

## 7 OCI AFFIRMATION AND DISCLOSURE

### 7.1 5X52.09.507-9000 Organizational Conflict of Interest (JUNE 2004)

- (a) The term "organizational conflict of interest" means that because of other activities or relationships with other persons, a person is unable to or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage. The term "person" includes a business organization.
- (b) The principals of organizational conflict of interest and descriptions thereof are set forth at FAR Subpart 9.5.
- (c) If the offeror/contractor is aware of a potential organizational conflict of interest (OCI), as defined at paragraph (a) above, with respect to this procurement, the offeror shall make immediate and full disclosure in writing to the Contracting Officer.
- (d) If in the performance of this contract the contractor discovers a potential organizational conflict of interest with respect to the contract, it shall make an immediate and full disclosure in writing to the Contracting Officer, which shall include a description of the actions the Contractor has taken or proposes to take to avoid, eliminate, or neutralize the conflict. In the event that the Contractor does not disclose a known potential conflict to the Contracting Officer, the Government may terminate the contract for default.

- (e) If the Contractor is directed by authorized Government personnel by written tasks or verbal directions (in program review or otherwise), to perform service which the Contractor believes to constitute a potential organizational conflict of interest, the contractor is required to notify the Contracting Officer in writing of the nature of the conflict within ten (10) days after receipt of the Government directive. The Contracting Officer has the sole responsibility for determining whether a conflict does, in fact, exist. No effort shall be expended toward the performance of the services in question until a determination has been made or otherwise directed by the Contracting Officer.
- (f) The Government has the unilateral right to waive one or more of the provisions of FAR Subpart 9.5 and this template, on a case-by-case basis, if it is determined by the Contracting Officer that a waiver is in the best interest of the Government. The Contractor must demonstrate to the Contracting Officer in writing that the Contractor can neutralize, mitigate or eliminate potential conflicts of interest.
- (g) Any restraints negotiated in response to FAR Part 9.507-2 as a condition of award due to an organizational conflict of interest, shall be incorporated into the instant contract or Delivery/Task Order(s) as appropriate. These restraints will have duration of not more than one year after completion of the contract effort or other time frame as determined by the Contracting Officer.
- (h) The Contractor shall insert Paragraphs (a) through (g) of this clause in all subcontracts.

## 7.2 Special Support Contractors

Organizations may provide administrative and Subject Matter Expert support for source selection execution; however, they will not be evaluators. Companies providing that support will be identified for each Topic Area at the time of posting in FEDBIZOPPS. Those companies identified will be prohibited from submitting white papers and proposals for the specified Topic Area.

## 8 CONTRACT AWARDS & TERMS AND CONDITIONS

One, multiple, or no awards may be made as a result of this BAA, subject to the availability of funding. NGA anticipates awarding multiple contracts per topic area. The number of contracts awarded and the dollar value of the contracts may vary, but no one contract will have a value greater than the maximum defined by the Topic (SEE APPENDIX A).

NGA reserves the right to accept proposals in response to the BAA in their entirety or to select portions of proposals for award. In the event NGA desires to award only a portion of a proposal, negotiations may be opened with that Offeror. Negotiations may result in funding levels or periods of performance different than originally proposed.

If additional funding becomes available within 12 months after receipt of proposals, NGA may choose to make additional awards under the terms of this BAA from the remaining proposals.

NGA reserves the right to allocate available funds among topics based on the quality of the responses and NGA priorities. Awards will be made at funding levels commensurate with the research.

Grants, cooperative agreements, and/or any other forms of federal assistance will not be awarded. Only procurement contracts will be awarded as a result of this BAA.

### **8.1 AWARD SCHEDULE**

Awards will be made in accordance with the schedule listed under Section 9. All proposals shall be valid for a minimum of 365 calendar days.

### **8.2 Instrument Type**

NGA anticipates awarding Firm Fixed Price contracts as a result of this BAA. Contracts can be valued up to but not exceed the maximum defined by the Topic (SEE APPENDIX A, Award Value).

### **8.3 Period of Performance:**

The performance period shall not exceed the time period defined by the Topic from date of contract award (SEE APPENDIX A).

### **8.4 Place of Performance**

All work shall be completed at the Offerors' facilities, except for a final demonstration/simulation deliverable, if applicable.

### **8.5 Government Furnished Property/Government Furnished Information (GFP/GFI)**

The Government shall not provide GFP/GFI.

### **8.6 Terms and Conditions**

Each award as a result of this BAA will contain clauses with the following conditions.

#### **8.6.1 Export Control**

- a) Contractors shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of the resultant contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.
- b) The contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of the resultant contract, including instances where the work is to be performed on site at any Government installation (whether in or

outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.

- c) The contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- d) The contractor shall be responsible for ensuring that the provisions of this clause (and any required DFARS clause) apply to its subcontractors as applicable or required.
- e) The contractor shall provide the Contracting Officer the identity of foreign nationals (other than those lawfully admitted into the U.S. for permanent residence) whom the contractor intends to use in support of this contract for Government review no less than 30 calendar days prior to their proposed start. If the contractor determines an applicable ITAR exemption requires action by the Government, including but not limited to 22 CFR 125.4 (b)(1), the exemption request shall be provided with submittal of the name. Only foreign nationals approved in writing by the Contracting Officer shall be permitted to work on this contract. Universities are also expected to utilize U.S. personnel, exceptions may be granted on a case by case basis.

#### **8.6.2 Human Subject Use**

Proposals selected for funding are required to comply with provisions of the Common Rule 32 (32 CFR 219) on the protection of human subjects in research ([http://www.access.gpo.gov/nara/cfr/waisidx\\_01/32cfr219\\_01.html](http://www.access.gpo.gov/nara/cfr/waisidx_01/32cfr219_01.html)) and the Department of Defense Directive 3216.02 (<http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf>). All proposals that involve the use of human subjects are required to include documentation of their ability to follow Federal guidelines for the protection of human subjects. This includes, but is not limited to, protocol approval mechanisms, approved Institutional Review Boards (IRB), and Federal-Wide Assurances. These requirements are based on expected human use issues sometime during the entire length of the proposed effort. Approval is still required by NGA prior to work beginning involving human subject use. The recipient shall provide their IRB approval of specific research, the informed user consent form, and the protocol and related documents as requested for secondary approval by NGA.

#### **8.6.3 Animal Subject Use**

Proposals selected for funding are required to comply with provisions of the (9 CFR I, Parts 1, 2, and 3) on the protection of animal subjects in research ([http://www.access.gpo.gov/nara/cfr/waisidx\\_08/9cfrv1\\_08.html](http://www.access.gpo.gov/nara/cfr/waisidx_08/9cfrv1_08.html)) and the Department of Defense Directive 3216.01 (<http://www.dtic.mil/whs/directives/corres/pdf/321601p.pdf>). If animals are to be utilized in the research effort proposed, the Offeror must complete a DoD Animal Use Protocol with supporting documentation (copies of American Association for Accreditation of Laboratory Animal Care (AALAC) accreditation and/or NIH assurance, Institutional Animal Care and Use Committee (IACUC) approval, research literature database searches, and the two most recent USDA inspection reports) and provide as part of its proposal. These requirements are based on expected animal use issues sometime during the entire length of the proposed effort. Approval is still required by NGA prior to work beginning involving animal

subject use. The recipient shall provide their IACUC approval of specific research, and the protocol and related documents as requested for secondary approval by DoD.

#### **8.6.4 Pre-Publication Review**

An NGA pre-publication review requirement of research results will be included in all awarded contracts.

#### **8.6.5 Intelligence Oversight**

NGA: 5X52.227-9001 Activities That Affect U.S. Persons (DEC 2004). This contract is sponsored by the National Geospatial-Intelligence Agency. All work and services to be performed hereunder shall be in strict compliance with procedures set forth in DoD 5240.1-R. DoD 5240.1-R is available at <http://www.dtic.mil/whs/directives/corres/pdf/524001r.pdf>

#### **8.6.6 Proprietary Data**

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the Offeror's responsibility to clearly define to the Government what is considered proprietary data. Each proposal received will be retained at NGA. Proposals will not be returned.

#### **8.6.7 Intellectual Property**

- a) Any contract issued will include DFARS clause 252.227-7013 entitled Rights in Technical Data-Noncommercial Items and Clause 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation. In accordance with these clauses, if applicable, the Offeror shall provide the following information in the price proposal:
  - 1) Noncommercial Items (Technical Data and Computer Software)  
Offerors responding to the BAA shall identify all noncommercial technical data and noncommercial computer software that it plans to generate, develop, and/or deliver in which the government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Offerors are advised that the Government will use this information during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the Offeror, as it may be necessary, to evaluate the Offeror's assertions. If no restrictions are intended, then the Offeror should state "NONE."
  - 2) Commercial Items (Technical Data and Computer Software)  
Offerors responding to this BAA shall identify all commercial technical data and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial items. The Government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions and may request additional information from the Offeror,

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as may be necessary, to evaluate the Offeror's assertions. If no restrictions are intended, then the Offeror should state "NONE."

3) Patents

Include documentation providing your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the NGA program. If a patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that you own the invention, or 2) proof of possession of appropriate licensing rights in the invention.

## 9 SIGNIFICANT DATES

The following table provides the significant dates referred to in the body of this announcement.

Action	Responsibility	Due Date
Issue BAA Announcement	Government	8 December 2018*
CLOSED: Topic No. 1 VALUE		
CLOSED: Topic No. 2 ARTIFICIAL INTELLIGENCE AUTOMATION		
CLOSED: Topic No. 3 SYNTHETIC APERTURE RADAR (SAR) IMAGE FORMATION		
<b>Topic No. 4</b>		
ARC Questions due not later than	Offeror	24 March 2017, 11:59 AM ET CLOSED
ARC Answers due	Government	31 March 2017
White Papers due not later than	Offeror	<b>12 April 2017, 11:59 AM ET</b>
White Paper Evaluations Completion/Notifications	Government	21 April 2017
Request for Proposal Released (if invited)	Government	28 April 2017
Proposals due not later than	Offeror	<b>12 June 2017, 11:59 AM ET</b>
Anticipated Contract Award	Government	01 September 2017

\*BAA for BIG open continuously for 3 year



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<b>Topic No. 5</b>		
ARC Questions due not later than	Offeror	14 April 2017, 11:59 AM ET
ARC Answers posted	Government	21 April 2017
White Papers due not later than <a href="mailto:NGA_BIG_BAA@nga.mil">NGA_BIG_BAA@nga.mil</a>	Offeror	<b>01 May 2017, 11:59 AM ET</b>
White Paper Evaluations Completion/Notifications	Government	12 May 2017
Request for Proposal Released (if invited)	Government	19 May 2017
Proposals due not later than <a href="mailto:NGA_BIG_BAA@nga.mil">NGA_BIG_BAA@nga.mil</a>	Offeror	<b>10 July 2017, 11:59 AM ET</b>
Anticipated Contract Award	Government	01 September 2017

\*BAA for BIG open continuously for 3 year

## **10 POINT OF CONTACT**

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### **10.1 Technical Issues**

If you have questions regarding the BAA please refer to the website discussed in Paragraph 2.1 (Questions about this BAA).

## **11 ADDENDUM FOR CLASSIFIED TOPICS**

### **11.1 Instructions for Classified Topic Submission**

Offerors shall use the classified Intelligence Community (IC) Acquisition Research Center (ARC) for Classified: Questions & Answers ONLY. Please read the classified BAA for white paper and proposal submission instructions. For assistance, please refer to ARC 20 Users Guide under the Help Resources button at the top of the ARC page.

Logon to the **classified** ARC with same logon and password as you did on the unclassified ARC. The high side ARC website is: <https://acq.nro.ic.gov>. Once you log in, it will send an email to your high side email and you must verify using the link in the email before it will log you into the site. You must validated/activate your high side account within 24 hours of trying to login to the classified ARC or it will be disabled. If it is disabled, you must contact the ACE Helpdesk at secure 855-4ACE or unclassified 702-230-6300.

## APPENDIX A, TOPICS

**CLOSED:** Topic Area 1: Value (Unclassified)

**CLOSED:** Topic Area 2: Artificial Intelligence Automation (Unclassified)

**CLOSED:** Topic Area 3: Synthetic Aperture Radar (SAR) Image Formation (Classified)

**OPEN: Topic Area 4: (Classified)**

Topic Area 4 is **Classified**. See BAA Section 11 Addendum for classified ARC Instructions.

### 2.1 Questions about this BAA

Offerors will be directed to use the Intelligence Community (IC) Acquisition Research Center (IC ARC), hereafter referred to as the IC ARC, for questions and answers (Q&A) at <https://acq.westfields.net>. **Topics 4 Questions closed on 24 March 2017.**

### 2.6 Award Value for Topic 4

The target award value for contracts is dependent on funding and the Research Objective, but will not exceed **\$850k**. White papers or proposals submitted for greater than **\$850k** may be eliminated from further consideration.

### 8.3 Period of Performance:

The performance period shall not exceed **12 months** from date of contract award.

**OPEN: Topic Area 5: (Unclassified)**

#### 1.5.1 Sensor Independent Complex Data for Backprojection (SICD-B)

The current National System for Geospatial-Intelligence (NGS) standard for synthetic aperture radar (SAR) complex image data is described in the Sensor Independent Complex Data (SICD) specifications, which is available on <http://www.gwg.nga.mil/ntb/baseline/docs/SICD/>. Related emerging standards for both earlier and later stages in the SAR image formation chain include Compensated Phase History Data (CPHD) and Sensor Independent Derived Data (SIDD), respectively. The SICD and SIDD standards currently support two of the most common SAR image formation processing algorithms – the Range Migration Algorithm (RMA) and the Polar Format Algorithm (PFA). Complex data produced by both of these image formation processing algorithms can be transformed through straightforward computation from an image domain into a time-frequency domain to allow a variety of processing steps to be performed, such as aperture trimming, sub-aperture processing to produce sub-aperture stacks, etc.

The SICD specification does not currently support complex image data formed using the Backprojection algorithms. This is primarily because the driving philosophy behind SICD specifications is to describe the processing steps applied to the data, and it is not clear how to include per-pixel processing used in Backprojection. Also, it has not been clear how typical sub-aperture processing could be done from Backprojection with imagery formed to terrain using a Digital Elevation Model (DEM).

This research focuses on three tasks that examine the aspects of performing Backprojection and exploiting the resulting data in a SICD. This includes (1) an examination of methods illustrating that the resulting complex image data set could be encoded in an extended SICD standard (to be defined) where traditional sub-aperture processing could be performed. (2) The research will examine exploitation requirements for the resulting SICD complex image data from Backprojection image formation processing involving methods of performing autofocus and apodization, as well as recommending methods of accommodating significant wavefront curvature from airborne SAR collection.

Additionally, (3) NGA seeks recommendations on extensions to the SICD specification to accommodate appropriate metadata in order to fully represent backprojected SAR complex imagery to automated workflows to produce detected imagery and other derived products with support for a sensor model for mensuration, Radar Cross Section (RCS), and other SICD metadata parameters used for exploitation.

## **2.1 Questions about this BAA, 5.2 Inquiries from Offerors**

Offerors will be directed to use the Intelligence Community (IC) Acquisition Research Center (IC ARC), hereafter referred to as the IC ARC, for questions and answers (Q&A) at <https://acq.westfields.net>. **Topic 5 Questions close on 14 April 2017.**

## **2.6 Award Value for Topic 5**

The target award value for contracts is dependent on funding and the Research Objective, but will not exceed **\$430,140**. White papers or proposals submitted for greater than **\$430,140** may be eliminated from further consideration.

## **8.3 Period of Performance:**

The performance period shall not exceed **12 months** from date of contract award.